

Patent Abstracts of Japan

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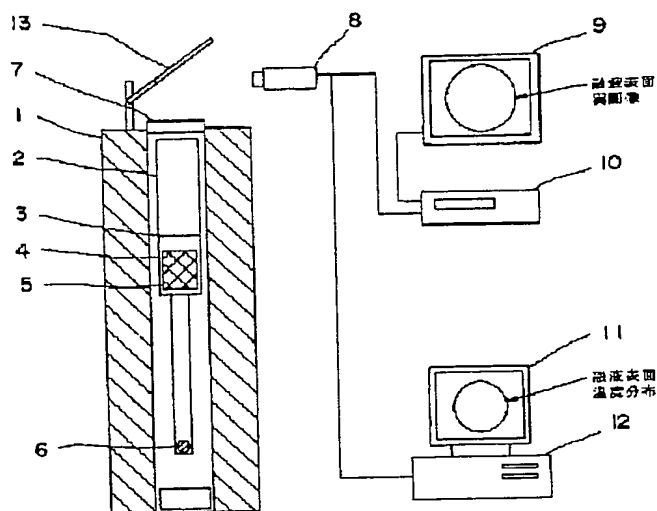
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TITLE : METHOD FOR GROWING COMPOUND SEMICONDUCTOR SINGLE CRYSTAL



ABSTRACT : PURPOSE: To prevent useless crystal growth and improve the yield of single crystal production by observing the state of a melt surface in growth of a compd. semiconductor single crystal by a perpendicular gradient freezing method.

CONSTITUTION: A crucible 4 contg. a raw material 5 of the compd. semiconductor is arranged into a quartz ampoule 2 and after this quartz ampoule is vacuum sealed, the quartz ampoule 2 is heated in a heating furnace 1 to melt the raw material 5. While the temp. distribution in the perpendicular direction of the heating furnace 1 is so controlled that the temp. on the bottom side of the raw material melt is kept higher than the temp. on the front surface side of the raw material melt, the temp. of the heating furnace 1 is gradually lowered and the compd. semiconductor single crystal is grown downward from the surface of the raw material melt. At this time, the crystal is grown while the state of the raw material melt surface in the crucible 4 before and after generation of the nucleus on the front surface of the raw material melt is observed from the upper part of the heating furnace 1. For example, the raw material melt state is photographed by a video camera 8 and is observed by connecting this video camera to a video tape recorder 10 and/or a monitor television 9.

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